

Figure 1

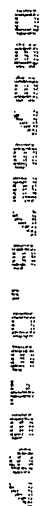
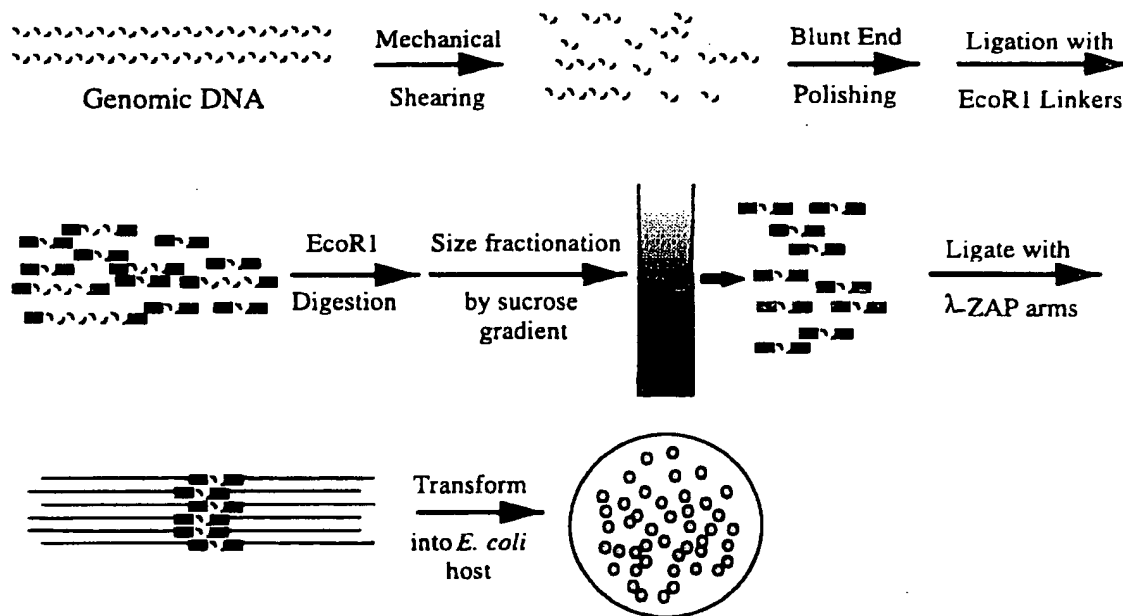


Figure 2.



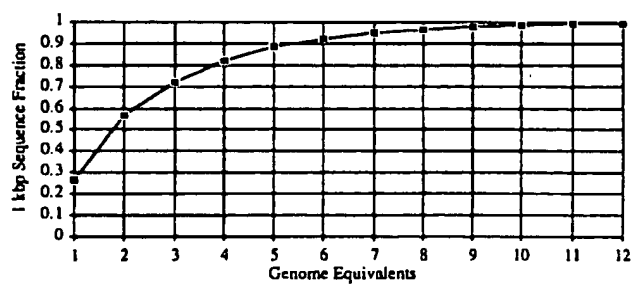


Figure 3.

Cell sorting to screen for recombinant enzymes

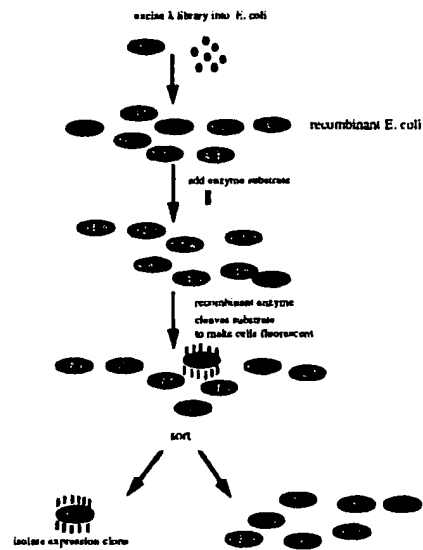


Figure 4.

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- cells were stained with FDG, CMFDG or C12FDG, incubated for 30 min. at 70°C, spotted onto a slide and exposed to UV light.
- bright spot indicates staining of cells

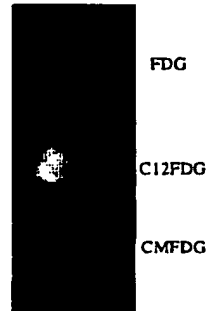


Figure 5

Figure 6

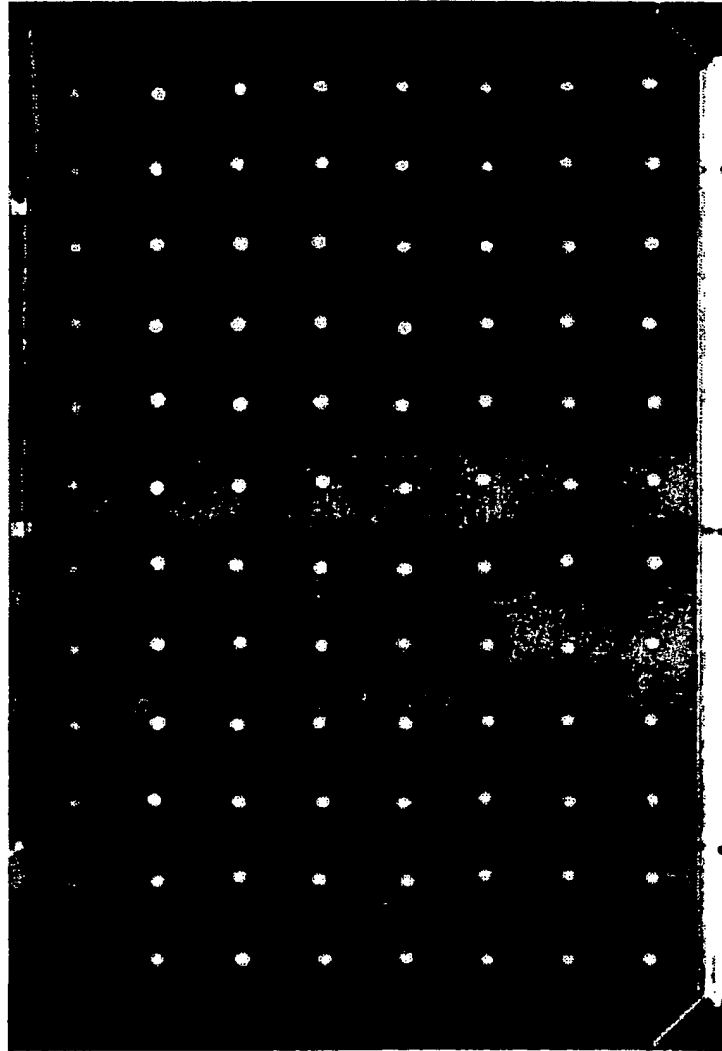
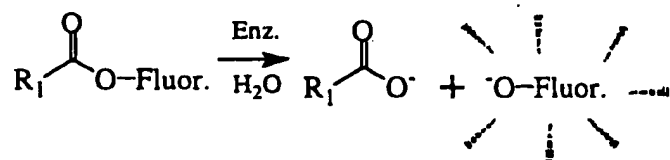


Figure 7



Principle type of fluorescence enzyme assay of deacylation.

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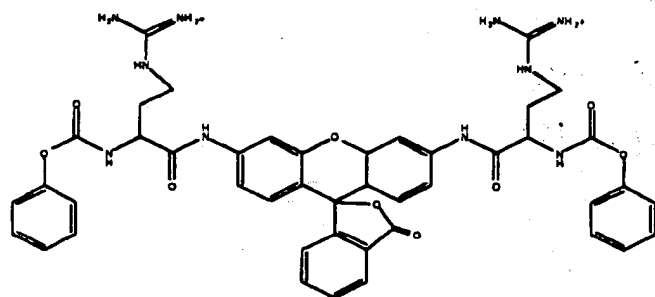
Figure 8



Staining of β -galactosidase clones from the hyperthermophilic archaeon *Sulfolobus solfataricus* expressed in *E.coli* using C_{12} -FDG as enzyme substrate.

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Figure 10



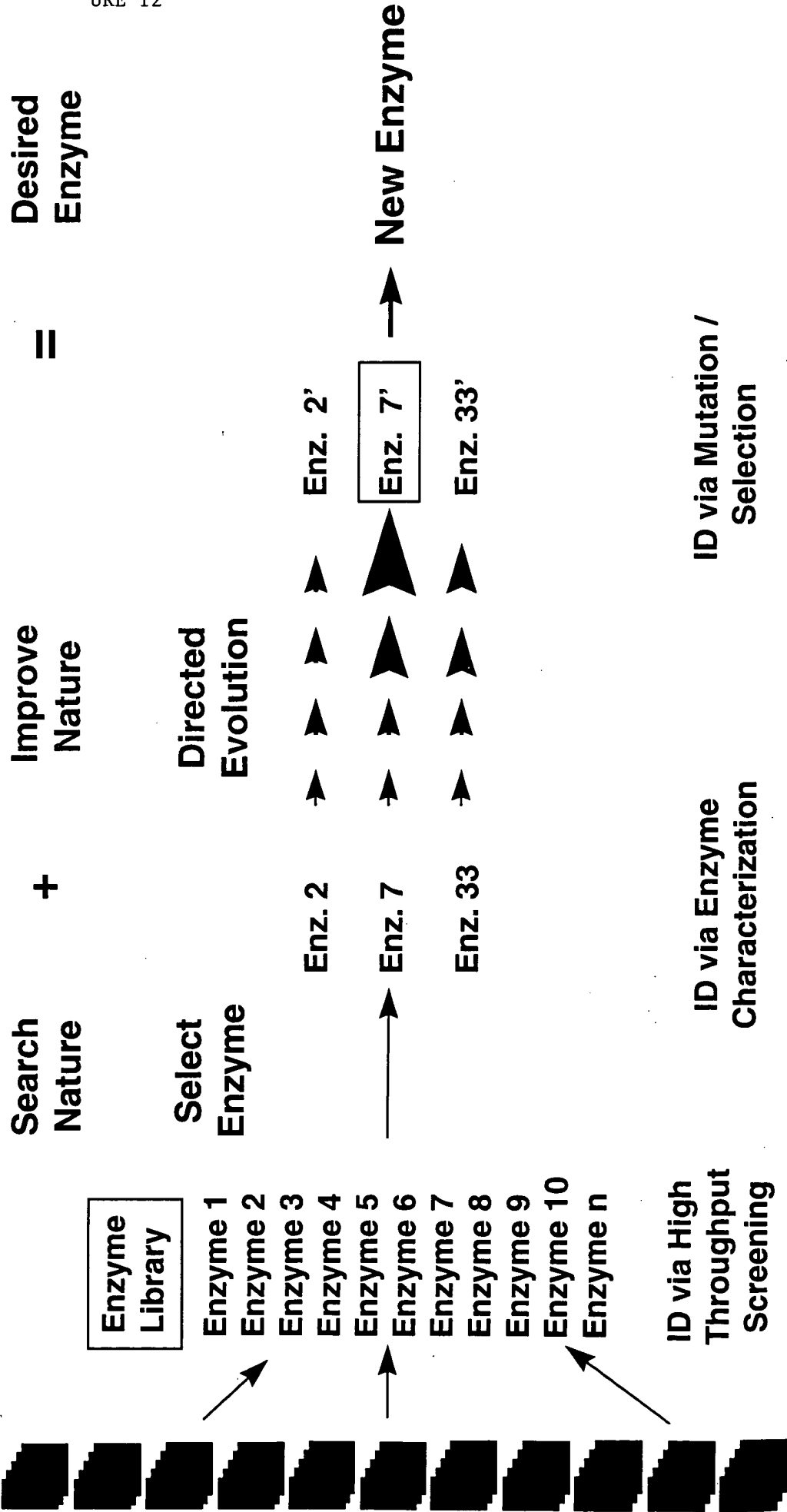
Rhodamine protease substrate.

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NA Library

Combinatorial Enzyme Development

(Natural + Non-natural Evolution)



Bypassing Barriers to Directed Protein Evolution

(Barrier = Capacity limit of directed evolution system)

